—CONH—SO_2—R^{10} (22)

R^{10} represents amino, monoalkylamino, dialkylamino, hydroxy, optionally substituted alkyl, optionally substituted aryl, optionally substituted aryloxy, or optionally substituted heterocyclic group, and the substituents of alkyl, aryl, aryloxy or heterocyclic group are the same or different and 1 to 3 substituents are selected from the group consisting of halogen, alkyl, haloalkyl, arylalkyl, alkoxy, alkylthio, alkoxyalkyl, alkylsulfonyl, hydroxy, amino, monoalkylamino, dialkylamino, carboxy, cyano and nitro.

Among the heterocyclic derivatives represented by the formula (1), preferable compounds are the following compounds wherein R^1 and R^2 are the same or different and each represents optionally substituted phenyl, and the substituents are the same or different and 1 to 3 substituents are selected from the group consisting of halogen, alkyl and alkoxy,

Y and Z correspond to either of the following cases (1) and (2):

(1) Y is N or CH, and Z is N or CH, and

(2) Y is N→O, and Z is CH,

A represents NR^7, and R^7 represents hydrogen, alkyl, or cycloalkyl,

D represents alkylene or alkenylene,

E represents single bond,

G represents O, S, SO, SO_2, or $C(R^8)(R^9)$, and R^8 and R^9 each represents hydrogen,

R^3 and R^4 are the same or different and each represents hydrogen or alkyl, and

Q represents carboxy, alkoxycarbonyl, tetrazolyl, or a group represented by the formula (22), and R^{10} represents amino, monoalkylamino, dialkylamino, hydroxy, optionally substituted alkyl, optionally substituted aryl, optionally substituted aryloxy, or optionally substituted heterocyclic group, and the substituents of alkyl, aryl, aryloxy or heterocyclic group are the same or different and 1 to 3 substituents selected from the group consisting of halogen, alkyl, haloalkyl, arylalkyl, alkoxy, alkylthio, alkoxyalkyl, alkylsulfonyl, hydroxy, amino, monoalkylamino, dialkylamino, carboxy, cyano and nitro.

Among the heterocyclic derivatives represented by the formula (1), more preferable compounds are the following compounds wherein R^1 and R^2 are the same or different and each represents optionally substituted phenyl, and the substituents are the same or different and 1 to 3 substituents are selected from the group consisting of halogen, alkyl and alkoxy,

Y and Z correspond to either of the following cases (1) and (2):

(1) Y is N, and Z is CH, and

(2) Y is CH, and Z is N or CH,

A represents NR^7, and R^7 represents hydrogen or alkyl,

D represents alkylene,

E represents single bond,

G represents O,

R^3 and R^4 are the same or different and each represents hydrogen or alkyl,

Q represents carboxy, tetrazolyl, or a group represented by the formula (22), and R^{10} represents amino, mono alkylamino, dialkylamino, hydroxy, optionally substituted alkyl, optionally substituted aryl, optionally substituted aryloxy, or optionally substituted heterocyclic group, and the substituents of alkyl, aryl, aryloxy or heterocyclic group are the same or different and 1 to 3 substituents are selected from the group consisting of halogen, alkyl, haloalkyl, arylalkyl, alkoxy, alkylthio, alkoxyalkyl, alkylsulfonyl, hydroxy, amino, monoalkylamino, dialkylamino, carboxy, cyano and nitro.

Among the heterocyclic derivatives represented by the formula (1), particularly preferable compounds are the following compounds wherein R^1 and R^2 are the same or different and each represents optionally substituted phenyl, and the substituents are the same or different and 1 to 3 substituents are selected from the group consisting of halogen, alkyl and alkoxy,

Y represents N, and Z represents CH,

A represents NR^7, and R^7 represents alkyl,

D represents alkylene,

E represents single bond,

G represents O,

R^3 and R^4 are the same or different and each represents hydrogen or alkyl, and

Q represents carboxy or a group represented by the formula (22), and R^{10} represents amino monoalkylamino, dialkylamino, hydroxy, optionally substituted alkyl, optionally substituted aryl, optionally substituted aryloxy or optionally substituted heterocyclic group, and the substituents of alkyl, aryl, aryloxy or heterocyclic group are the same or different and 1 to 3 substituents are selected from the group consisting of halogen, alkyl, haloalkyl, arylalkyl, alkoxy, alkylthio, alkoxyalkyl, alkylsulfonyl, hydroxy, amino, monoalkylamino, dialkylamino, carboxy, cyano and nitro.

Specific examples of preferable compounds among the heterocyclic derivatives represented by the formula (1) include the following compounds (1) to (32):

(1) 2-{4-[N-(5,6-di-p-tolylpyrazin-2-yl)-N-methylamino]butyloxy}acetic acid,

(2) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-methylamino]butyloxy}acetic acid,

(3) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butyloxy}acetic acid,

(4) 2-{4-[N-(5,6-di-p-tolylpyrazin-2-yl)-N-isopropylamino]butyloxy}acetic acid,

(5) 2,3-diphenyl-5-{N-[4-(carboxymethoxy)butyl]-N-methylamino}pyrazine 1-oxide,

(6) 2-{4-[N-(4,5-di-p-tolylpyrimidin-2-yl)-N-methylamino]butyloxy}acetic acid,

(7) 7-[N-(5,6-diphenylpyrazin-2-yl)-N-methylamino]heptanoic acid,

(8) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butylthio}acetic acid,

(9) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-methylamino]-(Z)-2-buten-1-yloxy}acetic acid,

(10) 2-{4-[N-(5,6-di-p-tolyl-1,2,4-triazin-3-yl)-N-isopropylamino]butyloxy}acetic acid,

(11) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-ethylamino]butyloxy}acetic acid,

(12) 2-{4-[N-(2,3-diphenylpyridin-6-yl)-N-methylamino]butyloxy}acetic acid,

(13) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butylsulfinyl}acetic acid,

(14) 2-{4-[N-(5,6-diphenyl-1,2,4-triazin-3-yl)-N-methylamino]butyloxy}acetic acid,

(15) 2-{4-[N-(4,5-diphenylpyrimidin-2-yl)-N-methylamino]butyloxy}acetic acid,

(16) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butyloxy}-N-(p-toluenesulfonyl)acetamide,

(17) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butyloxy}-N-(isopropylsulfonyl)acetamide,